of the target N-terminal fragment of $A\beta_{1-42}$ peptide optionally with a spacer (e.g., Gly-Gly, $\varepsilon$-N Lys).

The peptide immunogen of this invention is represented by one of the following formula:

$(A)_n$-(N-terminal fragment of $A\beta_{1-42}$ peptide)-$(B)_o$-$(Th)_m$-X;or
$(A)_n$-$(Th)_m$-$(B)_o$-( N-terminal fragment of $A\beta_{1-42}$ peptide)-X;

wherein

each A is independently an amino acid;

each B is a linking group selected from the group consisting of an amino acid, gly-gly, ($\alpha$, $\varepsilon$-N)lys, Pro-Pro-Xaa-Pro-Xaa-Pro (SEQ ID NO:77);

Each Th comprise an amino acid sequence that constitutes a helper T cell epitope, or an immune enhancing analog or segment thereof;

B1 Cont

(N-terminal fragment of $A\beta_{1-42}$ peptide) is a synthetic peptide B cell target site antigen and is a fragment of about 10 to about 28 amino acid residues wherein each fragment comprises EFRH of the $A\beta_{1-42}$ peptide or an immunologically functional analog thereof;

X is an $\alpha$-COOH or $\alpha$-$CONH_2$ of an amino acid ;

n is from 0 to about 10;
m is from 1 to about 4; and
o is from 0 to about 10.

In the Claims

12. The peptide immunogen represented by one of the following formulae:

$(A)_n$-(N-terminal fragment of $A\beta_{1-42}$ peptide)-$(B)_o$-$(Th)_m$-X;or
$(A)_n$-$(Th)_m$-$(B)_o$-( N-terminal fragment of $A\beta_{1-42}$ peptide)-X;

B2

wherein

each A is independently an amino acid;